

The Evaluation of Critical Pathways, Radionuclides, and Remedial Measures for Reducing the Radiological Dose to Returning Populations at a Former Nuclear Test Site

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Bikini Island, the major residence island at Bikini Atoll, was contaminated as a result of the BRAVO test conducted on March 1, 1954. During the past 20 years, Lawrence Livermore National Laboratory (LLNL) has conducted an extensive program for the Department of Energy (DOE) to characterize and document the radiological conditions at the atoll. The critical radionuclides have been determined, and all of the potential exposure pathways have been evaluated.

Dose assessments based on these extensive data have identified the critical pathways for potential exposure, and the potential dose to returning populations. The estimated population average dose exceeded current guidelines.

As a result, a program was designed to evaluate possible remedial measures to reduce the dose to returning populations. Alternative methods have been proposed to the Bikini, Rongelap, and Enewetak communities that will reduce the dose to about 10% pretreatment levels. The details of this work will be discussed in the presentation.

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